



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

IEC and Academia



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Jack Sheldon
**IEC Standardization
Strategy Manager**

- **...extend co-operation with and communication efforts in academic circles ... to develop and provide educational materials ...**
- **... ensure that member National Committees (NCs) represent all relevant national interests ... include ... researchers, academics ...**

IEC Centenary Challenge (2006)

- **1906 – 2006 IEC Centenary**
- **Competition for papers for world's academic institutions – “standards and business”**
- **For world's academic institutions**
- **In partnership with IEE (IET), IEEE, VDE and in association with The Economist**
- **Prizes (15 000\$, 5 000\$ and 2 000\$)**



IEC Centenary Challenge



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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1906-2006

The electric century

IEC CENTENARY CHALLENGE

IEC Challenge Commended Papers

"International Standardization as a Strategic Tool -
Commended papers from the IEC Centenary Challenge 2006"

[Order book](#) | [Download papers](#)

The **IEC**, in partnership with **IET** (formerly the IEE), **IEEE** and **VDE**, and in association with **The Economist**, invites the world's academic institutes to take up the IEC Centenary Challenge.

[The Challenge](#) | [Awards and Judging Criteria](#) | [The IEC and Partners](#) | [Guidelines](#) |
[Important Dates](#) | [Registration](#) | [Submission](#) | [The Rules](#) | [Copyright](#) | [Results](#)

A [brochure](#) is also available (PDF 715 kB).

- **ERC (Executive Review Council) – eminent leaders from government, business, media**
 - **Dr. Arden Bement Jr., Director US National Science Foundation**
 - **Dr. Takuo Sugano, Tokyo University**
 - **Prof. Klaus Wucherer, Management Board, Siemens AG**
 - **Tom Standage, Technology Editor, The Economist**
- **Participation – 100 institutions from 35 countries**
- **Award Ceremony at IET, London, December 2006**

1st prize

Université Toulouse III - Paul Sabatier, France

“Standardising Mesopic Vision Conditions and Incidence on Light Sources Science and Technology”

Authors: Dr. Georges Zissis and Dr. Stuart Mucklejohn

2nd prize co-winners

University of Colorado at Boulder, USA

“The Entrepreneur and Standards”

Authors: Ken Krechmer and Elaine Baskin

University of Tokyo, Japan

“Architecture-based Approaches to International Standardization and Evolution of Business Models”

Authors: Junjiro Shintaku, Koichi Ogawa and Tetsuo Yoshimoto

3rd prize

Toyo University, Japan

“Standardization and Patent Pools: Using Patent Licensing to Lead the Market”

Authors: Hajime Yamada

- Publication of winning papers on IEC web site:
<http://www.iecchallenge.org>
- IEC Challenge Book
International Standardization as a Strategic Tool –
Commended Papers from the IEC Centenary Challenge 2006

Academic papers

The articles listed below are the commended papers from the IEC Centenary Challenge. The IEC Centenary Challenge was a competition for papers on the economic, business and social impact of International Standards on business. It was organized in association with The Economist magazine and in partnership with three leading professional engineering bodies: the IET (Institute of Engineering and Technology); IEEE (Institute of Electrical and Electronics Engineers); and VDE, the German association for electrical, electronic and information technologies. The IEC Challenge Award Ceremony was held at Savoy Place, London, on 14 December 2006.

All articles are published in the book ["International Standardization as a Strategic Tool"](#), which can be purchased from the IEC Webstore

Commended papers (in alphabetical order)

	Size
<p>▶ Architecture-based approaches to international standardization and evolution of business models Junjiro Shintaku (lead author); Koichi Ogawa, Tetsuo Yoshimoto (co-authors) The University of Tokyo - Manufacturing Management Research Center, Japan</p>	PDF 1'636 KB
<p>▶ Benefits of standardization in the microelectronics industries and their implications on nanotechnology and other innovative industries Werner Bergholz (lead author); Bettina Weiss, Carlos Lee (co-authors) International University Bremen, Germany</p>	PDF 1'125 KB
<p>▶ Do national standards hinder or promote trade in electrical products? Johannes Moenius University of Redlands, USA</p>	PDF 982 KB
<p>▶ Industrial legislatures: The American system of standardization Andrew Russell</p>	PDF 938 KB

- **IEC Lectures Series I (2005) – Engineering**
Developed by Don Purcell, Chairman and CEO of the Center for Global Standards Analysis at the Catholic University of America
- **IEC Lectures Series II (2007) – Business**
Developed by Tineke M. Egyedi, Senior Researcher Standardization, Delft University of Technology, Netherlands



IEC Lecture Series

IEC Lecture series I (2005)

This first series of two lectures were developed for the IEC by Donald E. Purcell, Chairman and CEO of the Center for Global Standards Analysis at the Catholic University of America.

They are aimed at providing material for lectures in universities, business and engineering schools to support curricula covering standardization and its impact on business, industry and engineering. The two lectures will help in giving a general overview of international standardization and a basic knowledge about the IEC's activities. The IEC believes that students should understand the importance of international standardization in the context of the global market.

A CD-ROM comprising the two lectures and a copy of an IEC standard, IEC 61400-11, used in the presentations as an example of an IEC standard, is available from [IEC Central Office](#).

International Standardization in Business, Industry, Society and Technology

- ▶ [Lecture 1: The Strategic Value of International Standards](#)
- ▶ [Lecture 2: The International Electrotechnical Commission](#)

IEC Lecture series II (2007)

This series of three lectures were developed for the IEC by Tineke M. Egyedi, Senior Researcher Standardization, Delft University of Technology, Netherlands.

The IEC Lecture Series II has been developed on the occasion of the IEC centenary as material for lectures specifically for business and management schools. The objective of these lectures is to create a better awareness and understanding of the importance of standards, their impact on business and industry, for students in business, management of technology, and for technology policy faculties of technical universities.

This series complements the first series of lectures.

The Importance of Standards

- ▶ [Lecture 1: Introduction to Standards](#)
- ▶ [Lecture 2: Life Cycle of Standards](#)
- ▶ [Lecture 3: The Economic Value of Standards](#)

- **Three commented slide shows**
 - **Standardization Strategies – Introduction to Standardization and to the IEC**
 - **IEC Structure and Membership**
 - **Development of Standards**

About standardization











Introduction

The series of three narrated slide shows listed below will give you an introduction to the IEC and standardization in general. They are complementary to the lecture series featured in this Academia section.

- ▶ [Slide show 1](#)
Standardization strategies - Introduction to standardization and to the IEC
- ▶ [Slide show 2](#)
IEC structure and membership
- ▶ [Slide show 3](#)
Development of standards



- **Samples of working documents illustrating the progression from initial proposal to final standard**
- **In the form of an animated presentation**

Stage	Dates	PDF
NP (New Work Item Proposal)	2000-06-23 to 2000-10-02	
RVN (Report of Voting on NP)	2000-11-03	
CD (Committee Draft)	2002-02-15 to 2002-05-17	
CC (Compilation of comments on CD)	2002-06-14	
CC (Compilation of comments on CD)	2003-01-10	
CDV (Committee Draft for Vote)	2003-06-27 to 2003-11-28	
RVC (Result of Voting on CDV)	2004-01-09	
FDIS (Final Draft International Standard)	2004-08-13 to 2004-10-15	
RVD (Report of Voting on an FDIS)	2004-10-22	
IEC 62241 Nuclear power plants - Main control room - Alarm functions and presentation	2004-11	

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**CEI
IEC**
62241
Première édition
First edition
2004-11

Centrales nucléaires de puissance –
Salle de commande principale –
Fonctions et présentation des alarmes

Nuclear power plants –
Main control room –
Alarm functions and presentation



Numéro de référence
Reference number
CEI/IEC 62241:2004

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IEC and Academia

This section of the IEC website is dedicated to the academic world, professors, researchers and students.

From academic papers on "Consideration of the economic, business and social impact of the development and use of International Standards for end-users at any level of business activity" to lecture series and basics on eletrotechnical standardization, we are making available a wealth of documents.

- ▶ **Academic papers**
A library of recently published papers from Academia highlighting the social and economic benefits of International Standardization.
- ▶ **Lecture series**
A resource developed specifically for use by lecturers in universities and business and engineering schools. All lectures in Powerpoint available for download (no request needed).
- ▶ **About standardization**
These presentations take you through the standardization process - from an idea to a draft document to the consensus-based International Standard.
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- ▶ **IEC Challenge**
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